This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A method of displaying physiological patient data from a cyclic physiological waveform, the method comprising the acts of:

acquiring physiological patient data from a cyclic physiological waveform, the physiological patient data including a plurality of data points, each data point representing an amplitude of the physiological patient data;

assigning a first color to each data point having an amplitude in a first range;

assigning a second color to each data point having an amplitude in a second range;

assigning a third color to each data point having an amplitude in a third range, the first color, the second color, and the third color all being different colors; and

displaying the data points in a colorized three dimensional representation.

2. (Previously presented) A method as set forth in claim 1, wherein the physiological patient data is electrocardiogram data.

3. (Previously presented) A method as set forth in claim 1, wherein the physiological patient data is blood pressure data.

4. (Previously presented) A method as set forth in claim 1, wherein the physiological patient data is cardiac output data.

5. (Previously presented) A method as set forth in claim 1, wherein the physiological patient data is pulse oximetry data.

6. (Original) A method as set forth in claim 1, and further comprising the acts of storing the physiological patient data in a memory array.

7. (Previously presented) A method as set forth in claim 6, wherein the data points represent a plurality of waveforms, wherein each waveform represents at least one cycle of the cyclic physiological waveform, and wherein the memory array is a waveform array.

8. (Previously presented) A method as set forth in claim 1, and further comprising the acts of parsing the physiological patient data into a series of waveforms, and wherein each waveform represents at least one cycle of the cyclic physiological waveform.

9. (Previously presented) A method as set forth in claim 8, wherein the series of waveforms are median waveforms, and wherein each median waveform represents a plurality of cycles of the cyclic physiological waveform.

10. (Previously presented) A method as set forth in claim 8, wherein the act of displaying includes the act of plotting the parsed waveforms in a temporal alignment to allow detection of long term trends in the physiological patient data.

11. (Previously presented) A method as set forth in claim 1, and further comprising the act of assigning a representative X coordinate, Y coordinate, and Z coordinate, to each data point.

12. (Previously presented) A method as set forth in claim 1, further comprising the act of parsing the data points into a series of median waveforms, wherein each median waveform represents a plurality of cycles of the cyclic physiological waveform, and wherein the act of displaying further includes the act of plotting the median waveforms in a temporal alignment.

13. (Previously presented) A method as set forth in claim 1, wherein the first range, the second range, and the third range are each within a relevant range.

14. (Previously presented) A method as set forth in claim 13, wherein the relevant range is +0.5mV to -0.5mV.

15. (Previously presented) A method of displaying physiological patient data from a cyclic physiological waveform, the method comprising:

acquiring physiological patient data from a cyclic physiological waveform;

storing the physiological patient data in a memory array; and

displaying the physiological patient data in a colorized three dimensional representation, the act of displaying including the act of parsing the physiological patient data into a series of waveforms such that each successive waveform is plotted in a temporal alignment to allow detection of long term trends in the physiological patient data, the act of parsing each waveform into a series of successive data points such that each data point has a coordinate that is plotted on the display to produce a three dimensional representation, each successive data point having a discrete amplitude, the act of assigning a first color to each data point having an amplitude in a first range, the act of assigning a second color to each data point having an amplitude in a second range, and the act of assigning a third color to each data point having an amplitude in a third range, the first color, the second color, and the third color all being different colors.

16. (Original) A method as set forth in claim 15, wherein said physiological patient data is electrocardiogram data.

17. (Previously presented) A method as set forth in claim 15, wherein the physiological patient data is blood pressure data.

18. (Previously presented) A method as set forth in claim 15, wherein the physiological patient data is cardiac output data.

19. (Previously presented) A method as set forth in claim 15, wherein the physiological patient data is pulse oximetry data.

20. (Previously presented) A method as set forth in claim 15, wherein each waveform represents at least one cycle of the cyclic physiological waveform, and wherein the memory array is a waveform array.

21. (Currently amended) A method as set forth in claim 15, wherein the series of waveforms are median waveforms, and wherein each median waveform represents a plurality of ~~cylcescycles~~ of the cyclic physiological waveform.

22. (Original) A method as set forth in claim 15, wherein the relevant range is +0.5mV to -0.5mV.

23. (Previously presented) An apparatus for displaying physiological patient data from a cyclic physiological waveform, the apparatus comprising:

a display; and

a processor for producing a colorized three dimensional representation of physiological patient data from a cyclic physiological waveform, the physiological patient data including a plurality of data points, each data point having an amplitude representing a value of a physiological parameter and being assigned a first color when the amplitude is in a first range, a second color when the amplitude is in a second range, and a third color when the amplitude is in a third range, the first color, the second color, and the third color all being different colors.

24. (Previously presented) An apparatus as set forth in claim 23, and further comprising a patient monitoring device as the source of physiological patient data.

25. (Previously presented) An apparatus as set forth in claim 24, wherein the patient monitoring device includes a transducer for acquiring the physiological patient data from a patient.

26. (Original) An apparatus as set forth in claim 24, wherein the patient monitoring device is a Holter monitor.

27. (Original) An apparatus as set forth in claim 24, wherein the patient monitoring device is a stress-testing monitor.

28. (Original) An apparatus as set forth in claim 23, and further comprising a memory device connected to the processor.

29. (Previously presented) An apparatus as set forth in claim 28, wherein the physiological patient data is stored in a memory array.

30. (Previously presented) An apparatus as set forth in claim 29, wherein the data points represent a plurality of waveforms, wherein each waveform represents at least one cyclic physiological waveform, and wherein the memory array is a waveform array.

31. (Previously presented) An apparatus as set forth in claim 23, wherein the display is a black and white display capable of displaying/generating shades of gray in between black and white, wherein the first color is a first shade of gray, wherein the second color is a second shade of gray, and wherein the third color is a third shade of gray.

32. (Original) An apparatus as set forth in claim 23, wherein the display is a red-blue-green color display.

33. (Previously presented) An apparatus as set forth in claim 23, wherein each data point is assigned an X, Y, Z coordinate, and wherein the display has a plurality of pixels for displaying the respective coordinates.

34. (Original) An apparatus as set forth in claim 23, wherein the processor further comprises software for animation and walk through of three-dimensional representations.

35. (Previously presented) An apparatus as set forth in claim 23, wherein the processor further comprises software to receive the physiological patient data.

36. (Previously presented) An apparatus as set forth in claim 23, wherein the processor further comprises software to parse the physiological patient data.

37. (Previously presented) An apparatus as set forth in claim 36, wherein the physiological patient data is parsed into a series of waveforms, and wherein each waveform represents at least one cycle of the cyclic physiological waveform.

38. (Previously presented) An apparatus as set forth in claim 37, wherein the series of waveforms are median waveforms, and wherein each median waveform represents a plurality of cycles of the cyclic physiological waveform.

39. (Original) An apparatus as set forth in claim 23, wherein the processor further comprises software to generate a waveform display on the display.

40. (Original) An apparatus as set forth in claim 39, wherein the waveform display places the data points at respective pixels on the display.

41. (Previously presented) A software program for generating a display of physiological patient data from a cyclic physiological waveform, the software program comprising:

(a) a program module for acquiring physiological patient data from a cyclic physiological waveform;

(b) a program module for storing the physiological patient data in a memory array;

(c) a program module for displaying a colorized three dimensional representation of the physiological patient data;

(d) a program module for setting a current waveform to a first waveform in the memory array;

(e) a program module for providing a Z coordinate counter and initializing the Z coordinate counter to zero;

(f) a program module for providing a X coordinate counter and initializing the X coordinate counter to zero;

(g) a program module for providing a Y coordinate counter and initializing the Y coordinate counter to zero;

(h) a program module for determining a pixel color based on the Y coordinate of a data point, the pixel color being a first color when the Y coordinate is in a first range, a second color when the Y coordinate is in a second range, and a third color when the Y coordinate is in a third range, the first color, the second color, and the third color all being different colors;

(i) a program module for plotting a current data point of the current waveform at a current coordinate in the pixel color determined in (h);

(j) a program module for incrementing the X coordinate counter and repeating (h) and (i) until all data points in the current waveform are plotted; and

(k) a program module for incrementing the Z coordinate counter and repeating (h)-(j) until all waveforms in the waveform array are plotted.

42. (Previously presented) An apparatus for displaying physiological patient data from a cyclic physiological waveform, said apparatus comprising:

a display; and

a means for producing a colorized three dimensional representation of physiological patient data from a cyclic physiological waveform, the physiological patient data including a plurality of data points, each data point having an amplitude representing a value of a physiological parameter and being assigned a first color when the amplitude is in a first range, a second color when the amplitude is in a second range, and a third color when the amplitude is in a third range, the first color, the second color, and the third color all being different colors.

43. (Original) An apparatus as set forth in claim 42, and further comprising a patient monitor device as a source of physiological patient data.

44. (Original) An apparatus as set forth in claim 43, wherein the patient monitor device includes a transducer for acquiring the physiological patient data from a patient.

45. (Original) An apparatus as set forth in claim 43, wherein the patient monitor device is a Holter monitor.

46. (Original) An apparatus as set forth in claim 43, wherein the patient monitor device is a stress-testing monitor.

47. (Previously presented) An apparatus as set forth in claim 42, wherein the means for producing a colorized three dimensional representation includes storing the physiological data.

48. (Original) An apparatus as set forth in claim 47, wherein the physiological patient data is stored in a memory array.

49. (Previously presented) An apparatus as set forth in claim 48, wherein the data points represent a plurality of waveforms, wherein each waveform represents at least one cycle of the cyclic physiological waveform, and wherein the memory array is a waveform array.

50. (Currently amended) An apparatus as set forth in claim 42, wherein the display is a black and white display capable of displaying/generating shades of gray in between black and white wherein the first color is a first shade of gray, wherein the second color is a second shade of gray, and wherein the third color is a third shade of gray.

51. (Currently amended) An apparatus as set forth in claim 42, wherein the display is a red-blue-green color display.

52. (Previously presented) An apparatus as set forth in claim 42, wherein the means is further configured to assign each data point an X, Y, Z coordinate, and wherein the display has a plurality of pixels for displaying the respective coordinates.

53. (Previously presented) An apparatus as set forth in claim 42, wherein the means for producing a colorized three dimensional representation includes animating the three dimensional representation for analysis of the three dimensional representation.

54. (Previously presented) An apparatus as set forth in claim 42, wherein the means for producing a colorized three dimensional representation includes receiving physiological data.

55. (Previously presented) An apparatus as set forth in claim 42, wherein the means for producing a colorized three dimensional representation includes parsing the physiological data.

56. (Currently amended) An apparatus as set forth in claim 55, ~~where in~~wherein the physiological data is parsed into a series of waveforms, and wherein each waveform represents at least one cycle of the cyclic physiological waveform.

57. (Previously presented) An apparatus as set forth in claim 56, wherein the series of waveforms are median waveforms, and wherein each median waveform represents a plurality of cycles of the cyclic physiological waveform.

58. (Previously presented) An apparatus as set forth in claim 42, wherein the means for producing a colorized three dimensional representation includes generating a waveform display on the display.

59. (Original) An apparatus as set forth in claim 58, wherein the waveform display places the data points at respective pixels on the display.

60. (Previously presented) A method as set forth in claim 1, wherein the amplitude of the physiological patient data relates to an amplitude of the cyclic physiological waveform.

61. (Previously presented) A method as set forth in claim 1, wherein the amplitude of the physiological patient data is an amplitude of the cyclic physiological waveform.

62. (Previously presented) A method as set forth in claim 23, wherein the cyclic physiological waveform represents the physiological parameter.

63. (Previously presented) A method as set forth in claim 42, wherein the cyclic physiological waveform represents the physiological parameter.

STATEMENT CONCERNING COMMON OWNERSHIP

The present application Serial No. 09/711,691 and U.S. Patent No. 6,409,659 were, at the time the invention of the present application Serial No. 09/711,691 was made, owned by GE Medical Systems Information Technologies, Inc.